

SyncMaster

SERIES **3** | TA300

LED TV MONITOR

(MFM TV)

user manual

Thank you for purchasing this Samsung product.
To receive more complete service, please register
your product at

www.samsung.com/register

Model _____ Serial No. _____



If you have any questions, please call us at 1-800-SAMSUNG
(1-800-726-7864) for assistance.

SAMSUNG

Figures and illustrations in this User Manual are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

Important Warranty Information Regarding Television Format Viewing

See the warranty card for more information on warranty terms.

Wide screen format LED Displays (with 16:9 aspect ratios, the ratio of the screen width to height) are primarily designed to view wide screen format full-motion video. The images displayed on them should primarily be in the wide screen 16:9 ratio format, or expanded to fill the screen if your model offers this feature, with the images constantly in motion. Displaying stationary graphics and images on the screen, such as the dark sidebars on non-expanded standard format television video and programming, should be limited to no more than 5% of the total television viewing per week. Additionally, viewing other stationary images and text such as stock market crawls, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. Displaying stationary images for more than 5% of total viewing time can cause uneven aging of your LED display and leave subtle, but permanent burned-in ghost images in the LED picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars. On LED models that offer picture sizing features, use these controls to view different formats as a full screen picture. Be careful in the selection of television formats you use for viewing and the amount of time you view them. Uneven LED aging as a result of format selection and use, as well as burned in images, are not covered by your Samsung limited warranty.

Still image warning

Avoid displaying still images (such as jpeg picture files), still image elements (such as TV channel logos, stock or news bars at the screen bottom etc.), or programs in panorama or 4:3 image format on the screen. Constantly displaying still pictures can cause image burn-in on the screen, which will affect image quality. To reduce risk of this effect, please follow the recommendations below:

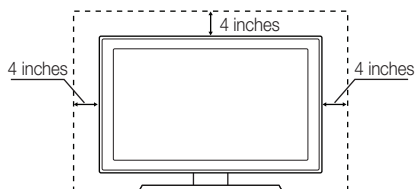
- Avoid displaying the same TV channel for long periods.
- Always try to display a full screen image.
- Reduce brightness and contrast to avoid the appearance of after-images.
- Use all TV features designed to reduce image retention and screen burn. Refer to proper user manual section for details.

Securing the Installation Space

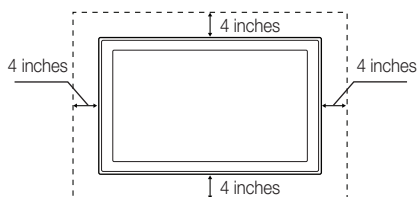
Keep the required distances between the product and other objects (e.g. walls) to ensure proper ventilation.

Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature of the product.

Installation with a stand.



Installation with a wall-mount.



Other Warnings

The actual appearance of the TV may differ from the images in this manual, depending on the model.

Be careful when you touch the TV. Some parts can be somewhat hot.

Contents

Getting Started

- List of Features 11
- Accessories 11
- Viewing the Control Panel 12
- Viewing the Remote Control..... 13
- How to Navigate Menus..... 14
- Connecting to an Antenna 14
- Plug & Play (Initial Setup)..... 15

Connections

- Connecting to an AV Device..... 16
- Connecting to a PC 17
- Changing the Input Source 19

Basic Features

- Channel Menu 20
 - Seeing Channels 20
 - Using Favorite Channels 20
 - Memorizing Channels 20
 - Editing Channels 21
 - Other Features 21
- Picture Menu 22
 - Changing the Preset Picture Mode 22
 - Adjusting Picture Settings 22
 - Changing the Picture Options 23
- Sound Menu 25
 - Changing the Preset Sound Mode 25
 - Adjusting sound settings 25
 - Sound Settings 25
- Setup Menu 26
 - Setting the Time 26
 - Using the Sleep Timer 26
 - Setting the On/Off Timer 26
 - Locking Programs 27
 - Other Features 28
- Support Menu..... 30

Advanced Features

- Media Play (USB) 31
 - Connecting a USB Device 31

Other Information

- Attaching a Wall Mount/Desktop Stand..... 35
- Anti-theft Kensington Lock..... 36
- Assembling the Cables 36
- Troubleshooting 37
- Storage and Maintenance..... 39
- License 39
- Specifications 40
- Index 41

Check the Symbol!



TOOLS

This function can be used by pressing the TOOLS button on the remote control.



Note

Indicates additional information.



Step by Step Guide

Check here for instructions on how to open the relevant submenu within the OSD (on screen display).

Getting Started

Safety Precautions

Icons used for safety precautions



WARNING

Failing to follow the precautions marked with this sign may result in a serious injury or even a fatality.



CAUTION

Failing to follow the precautions marked with this sign may result in a personal injury or property damage.



Do not perform.



Must be followed.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.



This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.

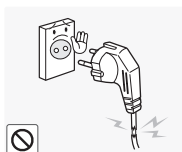


This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Power Related

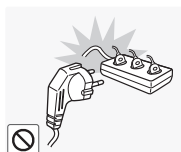
 The following images are for your reference and may differ depending on models and countries.

Warning



Avoid using a damaged power cord or plug or a loose power outlet.

- Otherwise, it may result in electric shock or fire.



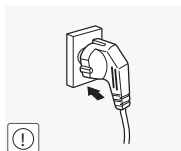
Avoid connecting multiple electric appliances to a single wall outlet.

- Otherwise, it may result in fire due to overheating of the wall outlet.



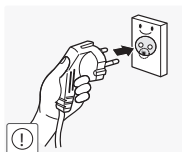
Avoid plugging in or unplugging the power supply with wet hands.

- Otherwise, it may result in electric shock.



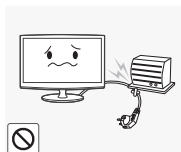
Plug the power plug in firmly.

- Otherwise, it may result in fire.



Make sure to connect the power cord to a grounded wall outlet (for insulation class 1 equipment only).

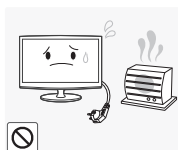
- Otherwise, it may result in electric shock or injury.



Avoid bending or twisting the power cord excessively and avoid placing heavy objects on the cord.

- Otherwise, it may result in electric shock or fire due to a damaged power cord.

Getting Started



Keep the power cord and the product away from a heater.

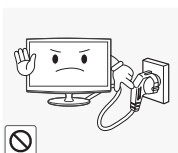
- Otherwise, it may result in electric shock or fire.



If the pins of the power plug or the wall outlet are covered in dust, clean it using a dry cloth.

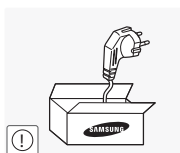
- Otherwise, it may result in fire.

Caution



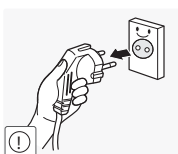
Avoid unplugging the power plug while the product is operating.

- Otherwise, it may damage the product due to electric shock.



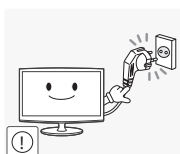
Make sure to use only the power cord supplied by our company. In addition, do not use the power cord of another electric appliance.

- Otherwise, it may result in electric shock or fire.



When unplugging the power plug from the wall outlet, make sure to hold it by the plug and not by the cord.

- Otherwise, it may result in electric shock or fire.

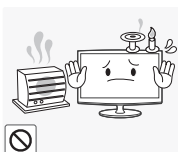


Connect the power plug to a wall outlet that can be easily reached.

- When a problem occurs with the product, you must unplug the power plug to cut the power off completely. You cannot cut the power off completely using only the power button on the product.

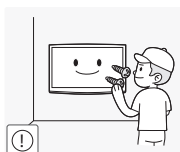
Installation Related

Warning



Avoid placing burning candles, mosquito repellent or cigarettes on the product.

- Otherwise, it may result in fire.



Ask an installation engineer or relevant company to install the product onto the wall.

- Otherwise, it may result in injury.
- Make sure to use the specified wall mount.



Avoid installing the product in a badly-ventilated location such as inside a bookshelf or closet.

- Otherwise, it may result in fire due to internal over-heating.



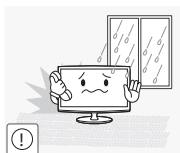
Keep the plastic bags used to pack the product away from children.

- If children place the plastic bags over their heads, they may suffocate.



Avoid installing the product in a location that is unstable or exposed to excessive vibration such as on an unstable or slanted shelf.

- The product may fall and this may result in damage to the product or injury.
- If you use the product in a location exposed to excessive vibrations, it may result in a problem with the product or fire.



Avoid installing the product in a location exposed to dust, moisture (sauna), oil, smoke or water (rain drops) and installing it within a vehicle.

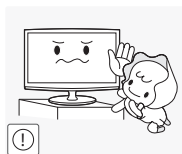
- This may result in electric shock or fire.

Getting Started



Avoid installing the product in a location exposed to direct sunlight and installing the product near a heat source such as a fireplace or heater.

- This may shorten the product life cycle or cause fire.



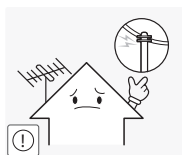
Avoid installing the product where children may reach it.

- If a child touches the product, the product may fall and this may result in injury.
- Since the front part is heavier, install the product on a flat and stable surface.



Bend the outdoor antenna cable downwards at the location where it comes in the house so that rainwater does not flow in.

- If rainwater enters the product, it may result in electric shock or fire.



Install the antenna far away from any high voltage cables.

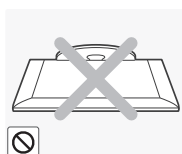
- If the antenna touches or falls onto a high voltage cable, it may result in electric shock or fire.

! Caution



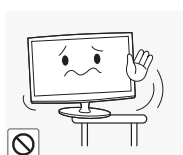
Do not let the product drop while moving it.

- This may result in a problem with the product or injury.



Do not place the product face down on the floor.

- This may damage the panel of the product.



When installing the product on a console or shelf, make sure that the front of the product does not protrude out of the console or shelf.

- Otherwise, this may cause the product to fall off and result in a malfunction or injury.
- Make sure to use a cabinet or shelf suitable to the size of the product.



When putting the product down, handle it gently.

- Otherwise, it may result in a problem with the product or injury.



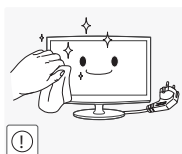
If the product is installed in a location where the operating conditions vary considerably, a serious quality problem may occur due to the surrounding environment. In this case, install the product only after consulting one of our service engineers about the matter.

- Places exposed to microscopic dust, chemicals, too high or low temperature, high humidity, airports or stations where the product is continuously used.

Getting Started

Cleaning Related

Warning



Before cleaning the product, unplug the power cord.

- Otherwise, it may result in electric shock or fire.



When cleaning the product, do not spray water directly over the product parts.

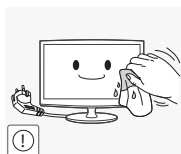
- Make sure that water does not enter the product.
- Otherwise, it may result in fire, electric shock or a problem with the product.

Caution



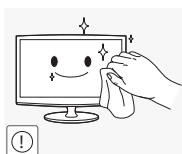
Avoid spraying cleansing agent directly onto the product.

- This may result in discoloration or cracking of the exterior of the product or the panel coming off.



When cleaning the product, disconnect the power cord and clean the product with the supplied cleaning cloth.

- Avoid using chemicals such as wax, benzene, alcohol, thinner, mosquito repellent, fragrance, lubrication or cleansing agent when cleaning the product. This may result in the exterior being deformed or the print being removed.



If you can't get the product clean with just the supplied cloth, use a soft, damp cloth with a "monitor-exclusive cleansing agent" and wipe the product with it.

- If no monitor-exclusive cleansing agent is available, dilute a cleansing agent with water at a ratio of 1:10 before cleaning the product.



Since the exterior of the product is easily scratched, be sure to use the supplied cleansing cloth.

Usage Related

Warning



Since a high voltage runs through the product, never disassemble, repair or modify the product yourself.

- Otherwise, it may result in fire or electric shock.
- If the product needs to be fixed, contact a service center.



To move the product, turn the power off and unplug the power cord, the antenna cable and any other wires connected to the product.

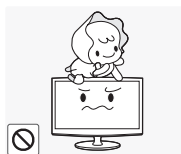
- Otherwise, it may result in electric shock or fire due to the damaged power cord.

Getting Started



If the product generates a strange noise, a burning smell, or smoke, unplug the power plug immediately and contact a service center.

- Otherwise, it may result in electric shock or fire.



Avoid letting children hang or climb onto the product.

- Otherwise, it may result in the product falling and this may result in injury or death.



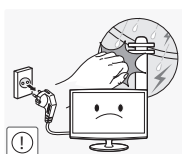
If you drop the product or the case is damaged, turn the power off and unplug the power cord. Contact a service center.

- Otherwise, it may result in fire or electric shock.



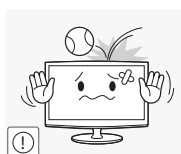
Avoid placing objects such as toys and cookies on top of the product.

- If a child hangs over the product to grab an object, the object or the product may fall and this may result in injury or even death.



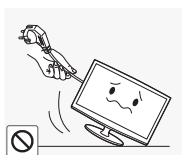
When thunder or lightning occurs, unplug the power cord and under no circumstance touch the antenna cable as this is dangerous.

- Otherwise, it may result in electric shock or fire.



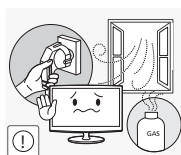
Avoid dropping an object over the product or cause impact to the product.

- Otherwise, it may result in electric shock or fire.



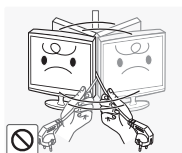
Avoid moving the product by pulling the power cord or antenna cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.



When a gas leak occurs, do not touch the product or the power plug and ventilate immediately.

- A spark may result in an explosion or fire.
- During a thunder or lightning storm, do not touch the power cord or antenna cable.



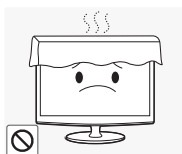
Avoid lifting up or moving the product by holding only the power cord or signal cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.



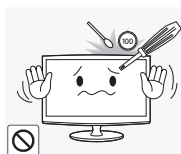
Avoid using or placing inflammable spray or objects near the product.

- This may result in an explosion or fire.



Take care not to block the vent by a table cloth or curtain.

- Otherwise, it may result in fire due to internal overheating.



Avoid inserting metal objects such as a chopsticks, coins or hairpins, or inflammable objects into the product (the vents, ports, etc).

- If water or substances enters the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.

Getting Started



Avoid placing a liquid container such as a vase, flowerpot, beverage, cosmetics or drugs, or a metal object over the product.

- If water or substances enter the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.



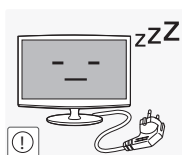
Do not press down hard on the product. The product may become deformed or damaged.

Caution



Displaying a still image for a long time may create a persistent image or stain on the screen.

- If you do not use the product for a long time, use the power-saving mode or set the screensaver to the moving picture mode.



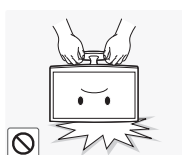
When not using the product for a long time such as leaving your home, unplug the power cord from the wall outlet.

- Otherwise, it may cause dust accumulation and result in fire caused by overheating or short circuit or result in an electric shock.



Set the appropriate resolution and frequency for the product.

- Otherwise, it may result in eye strain.



Avoid turning the product upside down or move the product holding only the stand.

- This may cause the product to fall, resulting in damage to the product or injury.

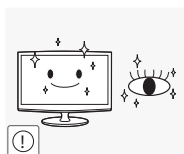


Watching the product from too close a distance continuously may damage your eyesight.



Avoid using a humidifier or cooker near the product.

- Otherwise, it may result in electric shock or fire.



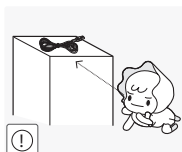
It is important to give your eyes some rest (5 minutes every hour) when viewing the product screen for long periods of time.

- This will alleviate any eye strain.



Since the display panel is hot after using it for a long time, do not touch the product.

Getting Started

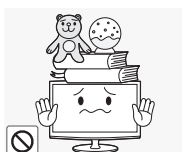


Keep the small accessories in a location out of the reach of children.



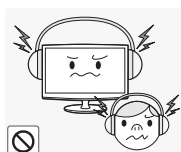
Take care when adjusting the angle of the product or the height of the stand.

- If your hand or finger is caught, you may be injured.
- If the product is tilted excessively, the product may fall and this may result in injury.



Avoid placing a heavy object over the product.

- Otherwise, it may result in a problem with the product or injury.



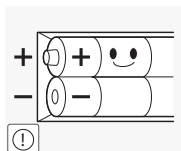
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



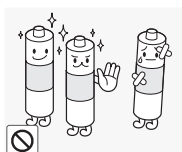
Be careful that children do not place the batteries in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



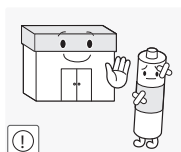
When replacing the batteries, insert them with right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only specified standard batteries. Do not use new and used batteries together.

- This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

Getting Started

List of Features

- **Excellent Digital Interface & Networking**
Using its built-in HD digital tuner, you can view non-subscription HD broadcasts without a cable box or STB (Set-Top-Box) satellite receiver.
- **Media Play (USB)**
Allows you to play music files and pictures saved on a USB device.

Accessories

- 🔧 Please make sure the following items are included with your TV. If any items are missing, contact your dealer.
- 🔧 The items' colors and shapes may vary depending on the model.
- 🔧 Check that there is no accessory hidden behind packing materials when you open the box.

- Remote Control (BN59-01006A) & Batteries (AAA x 2)
- User Manual (CD)
- Warranty Card / Safety Guide / Quick Setup Guide

- Cleaning Cloth
- Power Cord



Cable Holder



Stand Base



Stand Connector



HDMI-DVI

Input Cables (Sold Separately)



HDMI



Component



Composite (AV)



Coaxial (RF)

- 🔧 Check the cable before plug-in

	Cable	Ports
HDMI		
USB		

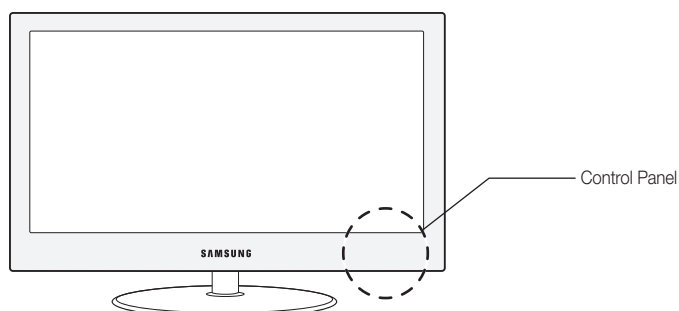


Do not plug cable upside down.
Be sure to check before plug-in.

Getting Started

Viewing the Control Panel

 The product color and shape may vary depending on the model.

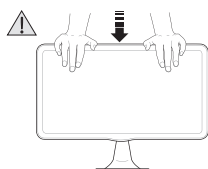


SOURCE 	Toggles between all the available input sources. In the on-screen menu, use this button as you would use the ENTER  button on the remote control.
MENU	Displays an on-screen menu, the OSD (on screen display) of your TV's features.
-  +	Adjusts the volume. In the OSD, use the -  + buttons as you would use the ◀ and ▶ buttons on the remote control.
▼ CH ▲	Changes the channels. In the OSD, use the ▼ CH ▲ buttons as you would use the ▼ and ▲ buttons on the remote control.
 (Power)	Turns the TV on or off.
Remote control sensor	Aim the remote control towards this spot on the TV.
Power Indicator	Blinks and turns off when the power is on and lights up in standby mode.

Standby mode

Your TV enters Standby mode when you turn it off and continues to consume a small amount of electric power. To be safe and to decrease power consumption, do not leave your TV in standby mode for long periods of time (when you are away on a holiday, for example). It is best to unplug the power cord.

Useful Information



Caution

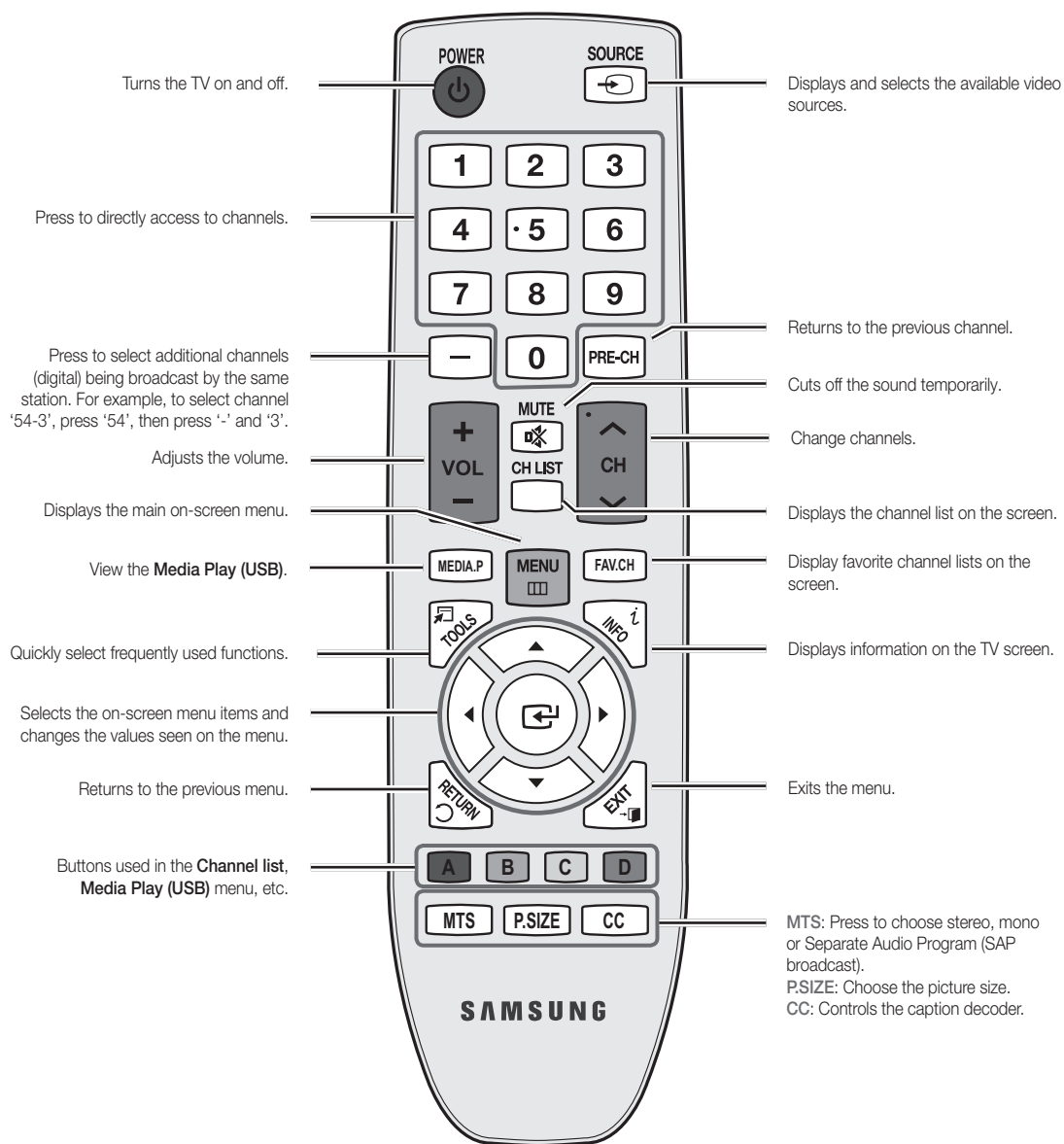
Do not press down hard on the product.

- The product may become deformed and damaged.

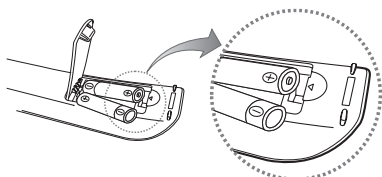
Getting Started

Viewing the Remote Control

 This is a special remote control for the visually impaired and has Braille points on the Channel and Number buttons.



Installing batteries (Battery size: AAA)



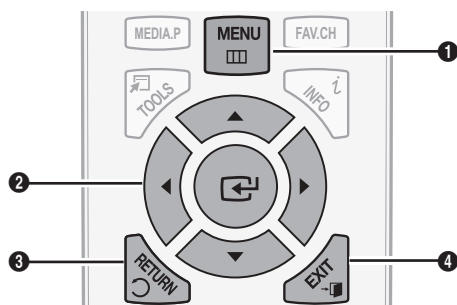
NOTE

- Use the remote control within 23 feet from the TV.
- Bright light may affect the performance of the remote control. Avoid use when nearby fluorescent lights or neon signs.
- The color and shape may vary depending on the model.

Getting Started

How to Navigate Menus

Before using the TV, follow the steps below to learn how to navigate the menu and select and adjust different functions.



- 1 **MENU** button: Displays the main on-screen menu.
- 2 **ENTER** / Direction button: Move the cursor and select an item. Confirm the setting.
- 3 **RETURN** button: Returns to the previous menu.
- 4 **EXIT** button: Exits the on-screen menu.

How to Operate the OSD (On Screen Display)

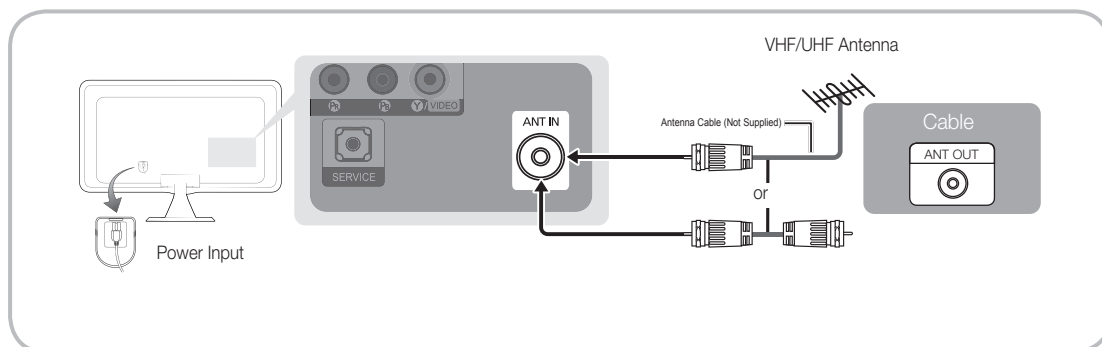
The access steps may differ depending on the selected menu.

1	MENU	The main menu options appear on the screen: Picture, Sound, Channel, Setup, Input, Application, Support.
2	▲ / ▼	Select an icon or option with the ▲ or ▼ button.
3	ENTER →	Press ENTER → to access the sub-menu.
4	▲ / ▼	Select the desired submenu with the ▲ or ▼ button.
5	◀ / ▶	Adjust the value of an item with the ◀ or ▶ button. The adjustment in the OSD may differ depending on the selected menu.
6	ENTER →	Press ENTER → to confirm the selection.
7	EXIT →	Press EXIT.

Connecting to an Antenna

Connecting the power cord and an antenna or cable connection

⚠ When you move or swivel the TV with Antenna cable tightly connected, there is high risk antenna jack on TV will be broken off.



Getting Started

Plug & Play (Initial Setup)

When you turn the TV on for the first time, a sequence of on-screen prompts will assist in configuring basic settings. To turn on the TV, press the **POWER**  button.

 **Plug & Play** is available only when the **Source List** is set to **TV**.

 To return to the previous step in the Plug & Play sequence, select the red button, and then press **ENTER** .

 Before turning on the TV, make you have connected the TV to an antenna or cable connection (p. 14).

1	Selecting a language	Press the ▲ or ▼ button, then press the ENTER  button. Select the desired OSD (On Screen Display) language.
2	Selecting Store Demo or Home Use	Press the ◀ or ▶ button, then press the ENTER  button. - Select the Home Use mode. Store Demo Mode is for retail environments. - To return the unit's settings from Store Demo to Home Use (standard): Press the volume button on the TV. When you see the volume OSD, press and hold MENU for 5 sec.
3	Selecting search options for auto tuning	Press the ▲ or ▼ button, then press the ENTER  button. Select Air , Cable or Auto .  If you selected Cable, you'll go to the cable system screen. Use the ▲ or ▼ button to select the correct cable signal format - STD, HRC, or IRC - and then press ENTER . Most cable systems use STD. Select the correct cable signal format for both the Digital and Analog systems.  When done, select Start, and the press ENTER .
4	Setting the Clock Mode	Set the Clock Mode automatically or manually. Auto: Allows you to select DST (Daylight Saving Time) mode and time zone. Manual: Allows you to manually set the current date and time (p. 27).
5	View the HDTV Connection Guide	The connection method for the best HD screen quality is displayed.
6	Enjoy the TV.	Press the ENTER  button.

POWER



If You Want to Rerun Plug & Play...

 **MENU**  → **Setup** → **Plug & Play** → **ENTER** 

NOTE

- To change the TV's setting from **Store Demo** to **Home Use** when not in **Plug & Play**, press the volume button on the TV. When you see the volume in the OSD, press and hold **MENU** for 5 sec.

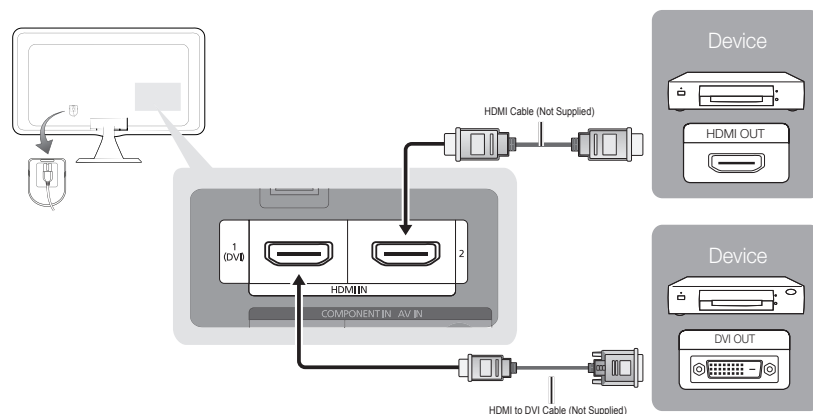
Connections

Connecting to an AV Device

Using an HDMI or HDMI/DVI Cable: HD connection (up to 1080p)

We recommend using the HDMI connection for the best quality HD picture.

Available devices: DVD, Blu-ray player, HD cable box, HD STB (Set-Top-Box) satellite receiver

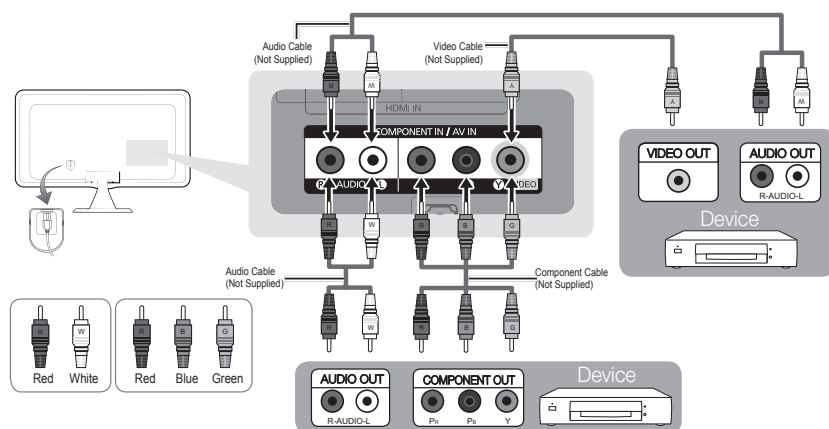


HDMI IN 1(DVI), 2

- When using an HDMI/DVI cable connection, you must use the **HDMI IN 1(DVI)** jack for video. A DVD, Blu-ray player, HD cable box, or HD STB satellite receiver may require a DVI-HDMI (DVI to HDMI) cable or DVI-HDMI (DVI to HDMI) adapter.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the TV. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- If an HDMI to DVI cable is connected to the HDMI IN 1(DVI) port, the audio does not work.

Using a Component (up to 1080p) or Audio/Video (480i only) Cable

Available devices: DVD, Blu-ray player, cable box, STB satellite receiver, VCR

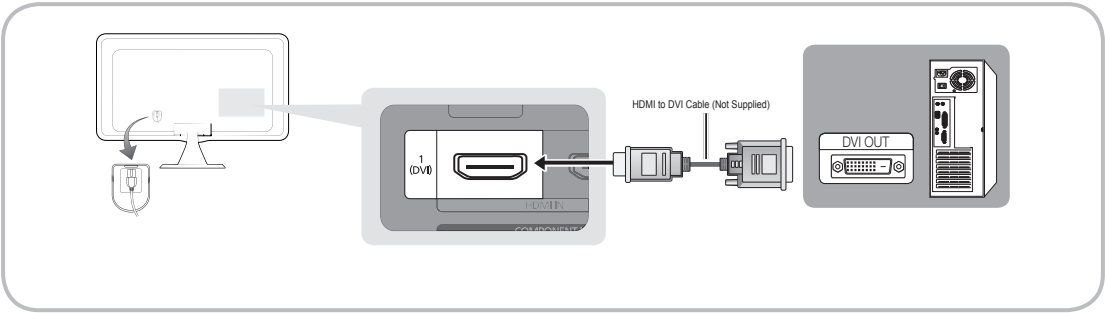


- When connecting to **AV IN**, the color of the **AV IN [Y/VIDEO]** jack (green) will not match the video cable (yellow).
- For better picture quality, the Component connection is recommended over the A/V connection.

Connections

Connecting to a PC

Using an HDMI/DVI Cable



Display Modes (HDMI/DVI Input)

If the signal from the PC is one of the following standard signal modes, the screen is set automatically. However, if the signal from the PC is not one of the following signal modes, a blank screen may be displayed or only the Power LED may be turned on. Therefore, configure it as follows referring to the User Manual of the graphics card.

Screen Size (Inches)	Display Mode			Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H / V)
	Mode	Resolution					
19" 22" 23" 24" 27"	IBM	640 x 350	70Hz	31.469	70.086	25.175	+/-
	IBM	720 x 400	70Hz	31.469	70.087	28.322	-/+
	MAC	640 x 480	67Hz	35.000	66.667	30.240	-/-
	MAC	832 x 624	75Hz	49.726	74.551	57.284	-/-
	VESA DMT	640 x 480	60Hz	31.469	59.940	25.175	-/-
	VESA DMT	640 x 480	72Hz	37.861	72.809	31.500	-/-
	VESA DMT	640 x 480	75Hz	37.500	75.000	31.500	-/-
	VESA DMT	800 x 600	56Hz	35.156	56.250	36.000	+/+
	VESA DMT	800 x 600	60Hz	37.879	60.317	40.000	+/+
	VESA DMT	800 x 600	72Hz	48.077	72.188	50.000	+/+
	VESA DMT	800 x 600	75Hz	46.875	75.000	49.500	+/+
	VESA DMT	1024 x 768	60Hz	48.363	60.004	65.000	-/-
	VESA DMT	1024 x 768	70Hz	56.476	70.069	75.000	-/-
	VESA DMT	1024 x 768	75Hz	60.023	75.029	78.750	+/+
	VESA DMT	1360 x 768	60Hz	47.712	60.015	85.500	+/+

Connections

Screen Size (Inches)	Display Mode			Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H / V)
	Mode	Resolution					
22" 23" 24" 27"	MAC	1152 x 870	75Hz	68.681	75.062	100.000	-/-
	VESA DMT	1152 x 864	75Hz	67.500	75.000	108.000	+/+
	VESA DMT	1280 x 800	60Hz	49.702	59.810	83.500	-/+
	VESA DMT	1280 x 960	60Hz	60.000	60.000	108.000	+/+
	VESA DMT	1280 x 1024	60Hz	63.981	60.020	108.000	+/+
	VESA DMT	1280 x 1024	75Hz	79.976	75.025	135.000	+/+
	VESA DMT	1440 x 900	60Hz	55.935	59.887	106.500	-/+
	VESA DMT	1440 x 900	75Hz	70.635	74.984	136.750	-/+
	VESA DMT	1680 x 1050	60Hz	65.290	59.954	146.250	-/+
	VESA DMT	1920 x 1080	60Hz	67.500	60.000	148.500	+/+

NOTE

- For Computer(PC) connection, you must use the **HDMI IN 1(DVI)** jack.
- The interlace mode is not supported.
- The set may operate abnormally if you select a non-standard video format.
- Separate and Composite modes are supported. SOG(Sync On Green) is not supported.

 If there is no power cut-off switch, the power consumption is "0" only when the power cord is disconnected.

 DPM(Display Power Management) Function does not work if you used in connection with the HDMI port of this product.

 If an HDMI to DVI cable is connected to the **HDMI IN 1(DVI)** port, the audio does not work.

Using an Service Cable Connection

Available devices: External devices that support Service.



SERVICE: Connector for service only.

Connections

Changing the Input Source

Source List

Use to select TV or an external input sources such as a DVD / Blu-ray player / cable box / STB satellite receiver.



MENU → Input → Source List → ENTER

SOURCE



■ TV / AV / Component / HDMI1/DVI / HDMI2

1. Press the **SOURCE** button on your remote.
2. Select a desired external input source.
 - You can only choose external devices that are connected to the TV. In the **Source List**, connected inputs will be highlighted.

Edit Name



MENU → Input → Edit Name → ENTER

- **VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI / TV / IPTV / Blu-ray / HD DVD / DMA:** Name the device connected to the input jacks to make your input source selection easier.



If you have connected a PC to the **HDMI IN 1 (DVI)** port with an HDMI cable, select **PC** under **Edit Name** to enter a device name.



If you have connected a PC to the **HDMI IN 1 (DVI)** port with an HDMI to DVI cable, select **DVI PC** under **Edit Name** to enter a device name.



If you connected an AV device to the **HDMI IN 1 (DVI)** port with an HDMI to DVI cable, select **DVI** under **Edit Name** to enter a device name.



For Computer(PC) connection, you must use the **HDMI IN 1(DVI)** jack.

Information

You can see detailed information about the selected external device.

Basic Features

Channel Menu

Seeing Channels

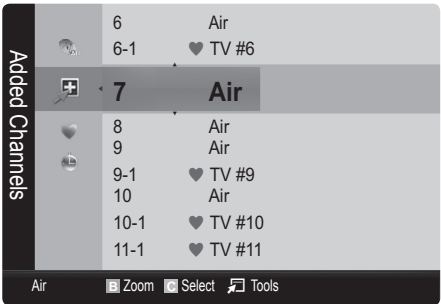
Channel List



MENU → Channel → Channel List → ENTER

CH LIST

Select a channel in the **All Channels**, **Added Channels**, **Favorite** or **Programmed** screen by pressing the ▲ / ▼ and ENTER buttons. Then you can watch the selected channel.



- **All Channels**: Shows all currently available channels.
 - **Added Channels**: Shows all added channels.
 - **Favorite**: Shows all favorite channels.
 - **Programmed**: Shows all currently reserved programs.
- Using the color buttons with the **Channel List**
- **Zoom**: Enlarges or shrinks a channel number.
 - **Select**: Selects multiple channel lists. Select desired channels and press the Yellow button to set all the selected channels at the same time. The ✓ mark appears to the left of the selected channels.
 - **(Tools)**: Displays the **Channel List** option menu. (The options menus may differ depending on the situation.)

Channel Status Display Icons

Icons	Operations
✓	A channel selected.
♥	A channel set as a Favorite.
⌚	A reserved Program.

Using Favorite Channels



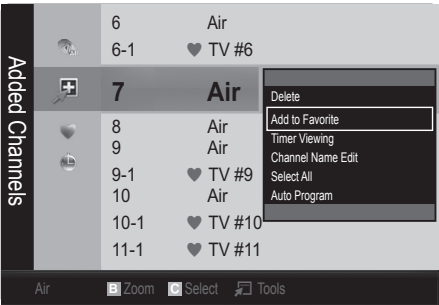
MENU → Channel → Channel List → ENTER

♥ Add to Favorite / Delete from Favorite

TOOLS

Set channels you watch frequently as Favorites.

1. Select a channel and press the **TOOLS** button.
2. Add or delete a the channel using the **Add to Favorite** or **Delete from Favorite** menu respectively.



To show all Favorite channels, click on the button shown on the right.

FAV.CH



Memorizing Channels



MENU → Channel → ENTER

Antenna (Air / Cable) TOOLS

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e. an **Air** or a **Cable** system).

Auto Program

- **Air**: Air antenna signal.
- **Cable**: Cable antenna signal.
- **Auto**: Air and Cable antenna.

Basic Features

NOTE

- When selecting the Cable TV system: **STD**, **HRC** and **IRC** identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point, the signal source has been selected.
- After all the available channels are stored, it starts to remove scrambled channels. The **Auto program** menu then reappears.

How to Stop Auto Programming

1. Press the **ENTER**  button.
2. A message will ask **Stop Auto Program?**. Select **Yes** by pressing the **◀** or **▶** button.
3. Press the **ENTER**  button.

Editing Channels

 **MENU**  **Channel**  **Channel List**  **ENTER** 

Channel Name Edit

1. Select a channel and press the **TOOLS** button.
 2. Edit the channel name using the **Channel Name Edit** menu.
- **Channel Name Edit** (analog channels only): Assign your own channel name.

Other Features

 **MENU**  **Channel**  **ENTER** 

Clear Scrambled Channel

This function is used to filter out scrambled channels after Auto Program is completed. This process may take up to 20~30 minutes.

How to Stop Searching Scrambled Channels

1. Press the **ENTER**  button to select **Stop**.
 2. Press the **◀** button to select **Yes**.
 3. Press the **ENTER**  button.
-  This function is only available in **Cable** mode.

Channel List

 **MENU**  **Channel**  **Channel List**  **ENTER** 

Channel List Option Menu

Set each channel using the Channel List menu options (**Add / Delete**, **Timer Viewing**, **Select All / Deselect All**). Option menu items may differ depending on the channel status.

1. Select a channel and press the **TOOLS** button.
2. Select a function and change its settings.

- **Add / Delete:** Delete or add a channel to display the channels you want.

NOTE

- All deleted channels will be shown on the **All Channels** menu.
- A gray-colored channel indicates the channel has been deleted.
- The **Add** menu only appears for deleted channels.
- Delete a channel from the **Added Channels** or **Favorite** menu in the same manner.

- **Timer Viewing:** You can set a desired channel to be displayed automatically at the reserved time. Set the current time first to use this function.

1. Press the **◀** / **▶** / **▲** / **▼** buttons to select the desired channel in **Channel List**.
2. Press the **TOOLS** button, then select **Timer Viewing**.
3. Scroll up or down to adjust the settings in the box, or use the numeric buttons on your remote to enter the date and time.

 If you selected **Once**, **Every Week** or **Everyday** in **Repeat**, you can enter the date you want.

4. Select **OK**, then press the **ENTER**  button when done.

NOTE

- Only memorized channels can be reserved.
- Reserved programs will be displayed in the **Programmed** menu.
- When a digital channel is selected, press the **▶** button to view the digital program.

- **Select All:** Select all the channels in the channel list.

- **Deselect All:** Deselect all the selected channels.

 You can only select **Deselect All** when one or more channels are selected.

Basic Features

Programmed

(in **Channel List**)

You can view, modify or delete a show you have reserved to watch. **Programmed** timer viewing is displayed here. Highlight a program and press the **TOOLS** button to display Options.

- **Change Info:** Change a show you have reserved to watch. Begin with step 3 of "Timer Viewing" above.
- **Cancel Schedules:** Cancel a show you have reserved to watch.
 -  This deletes the highlighted or selected program(s).
- **Information:** Display a show you have reserved to watch. (You can also change the reservation Information.)
 -  Alternatively, you can view Information by highlighting a program and pressing the **ENTER** button.
- **Select All / Deselect All:** Select or deselect all reserved programs.

Fine Tune

(analog channels only)

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, fine tune the channel manually. Scroll to the left or right until the image is clear.

-  Settings are applied to the channel you're currently watching.
-  Fine tuned channels that have been saved are marked with an asterisk "*" on the right-hand side of the channel number in the channel banner.
-  To reset the fine-tuning, select **Reset**.

Picture Menu

Changing the Preset Picture Mode

 **MENU** → **Picture** → **Mode** → **ENTER**

Mode

Picture modes apply preset adjustments to the picture. Select a mode using the up and down arrow keys, and then press the **ENTER** button.

 When connecting a PC, you can only make changes to the **Natural**.

- **Dynamic:** Suitable for a bright room.
- **Standard:** Suitable for a normal environment.
- **Natural:** Suitable for reducing eye strain.
 -  It is available when connecting a PC.
- **Movie:** Suitable for watching movies in a dark room.

Adjusting Picture Settings

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

 **MENU** → **Picture** → **ENTER**

Your television has several setting options for picture quality control.

NOTE

- When you make changes to **Backlight, Contrast, Brightness, Sharpness, Color** or **Tint (G/R)**, the OSD will be adjusted accordingly.
- When connecting a PC, you can only make changes to **Backlight, Contrast** and **Brightness**.
- Settings can be adjusted and stored for each external device connected to the TV.
- Lowering picture brightness reduces power consumption.

Basic Features

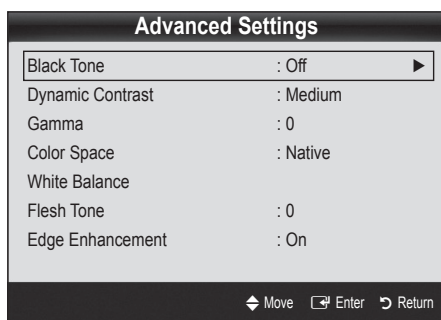
Changing the Picture Options

Advanced Settings

 **MENU** → **Picture** → **Advanced Settings** → **ENTER**

Advance Settings are available in the **Standard** and **Movie** modes. When connecting a PC, you can only make changes to **Gamma** and **White Balance**. They are not available when you are watching a digital channel.

To use, select an option using the up and down arrow keys, and then press **ENTER**. Use the arrow keys to change a value or setting, and then press **ENTER**.



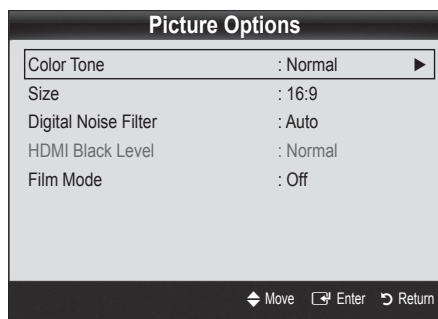
- **Black Tone (Off / Dark / Darker / Darkest):** Select the black level to adjust the screen depth.
- **Dynamic Contrast (Off / Low / Medium / High):** Adjust the screen contrast.
- **Gamma:** Adjust the primary color intensity.
- **Color Space (Auto / Native):** Adjusts the range of colors (the color gamut) available to create images.
- **White Balance:** Adjusts the red, green, and blue brightness so that the brightest point of a picture becomes white.
 - R-Offset / G-Offset / B-Offset:** Adjust each color's (red, green, blue) darkness.
 - R-Gain / G-Gain / B-Gain:** Adjust each color's (red, green, blue) brightness.
 - Reset:** Resets the **White Balance** to it's default settings.
- **Flesh Tone:** Emphasize pink "Flesh Tone."
- **Edge Enhancement (Off / On):** Emphasize object boundaries.

Picture Options

 **MENU** → **Picture** → **Picture Options** → **ENTER**

Select an option using the up and down arrow keys, and then press **ENTER**. Use the arrow keys to change the setting, and then press **ENTER**.

 When connecting a PC, you can only make changes to the **Color Tone**, **Size**.



■ Color Tone (Cool / Normal / Warm1 / Warm2)

 **Warm1** or **Warm2** will be activated when the picture mode is **Movie**.

 You can adjust and store settings for each external device you have connected to an input on the TV.

- **Size:** If you have a cable box or satellite receiver, it may have its own set of screen sizes as well. However, we highly recommend you use your TV's 16:9 mode most of the time.



16:9 : Sets the picture to 16:9 wide mode.

Zoom1 : Use for moderate magnification. Cuts off the top and sides.

Zoom2 : Use for a stronger magnification.

Wide Fit : Enlarges the aspect ratio of the picture to fit the entire screen.

 Available with HD 1080i / 720p signals in 16:9 mode.

4:3 : Sets the picture to basic (4:3) mode.

 Do not watch in 4:3 format for a long time. Traces of borders displayed on the left, right and center of the screen may cause image retention(screen burn) which are not covered by the warranty.

Screen Fit : Displays the full image without any cut-off when HDMI (720p / 1080i / 1080p) or Component (1080i / 1080p) signals are inputted.

Basic Features

NOTE

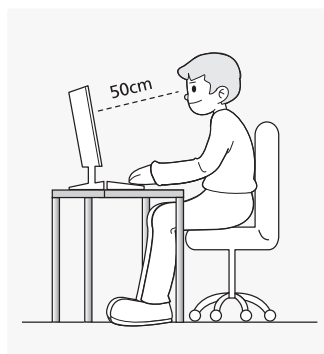
- After selecting **Zoom1**, **Zoom2** or **Wide Fit**:
 - Press the ► button to select **Position**.
 - Press the ENTER button.
 - Press the ▲ or ▼ button to move the picture up or down.
 - Press the ENTER button.

If you want to reset the pictures to its original position, select **Reset**, and then press ENTER. The picture will be reset to its default position.
- After selecting **Screen Fit** in HDMI (1080i/1080p) or Component (1080i/1080p) mode, you may need to center the picture:
 - Press the ◀ or ▶ button to select **Position**.
 - Press the ENTER button.
 - Press the ▲, ▼, ◀ or ▶ button to move the picture.
 - Press the ENTER button.

If you want to reset the pictures to its original position, select **Reset**, and then press ENTER. The picture will be reset to its default position.
- HD (High Definition): 16:9 - 1080i/1080p (1920x1080), 720p (1280x720)
- Settings can be adjusted and stored for each external device you have connected to an input on the TV.

Input Source	Picture Size
ATV, AV, Component (480i, 480p)	16:9, Zoom1, Zoom2, 4:3
DTV(1080i), Component (1080i, 1080p), HDMI (720p, 1080i, 1080p)	16:9, 4:3, Wide Fit, Screen Fit

Maintaining the Correct Posture when Using this Product



Maintain the correct posture when using this product.

- Straighten your back.
- Keep a distance of 45~50 cm (15~19 inches) from your eyes to the screen. Look down at the screen and face the screen forwards.
- Adjust the angle of the product so that light is not reflected onto the screen.
- Keep your elbow at a right angle and keep your arm level with the back of your hand.
- Keep your elbow at a right angle.
- Place your heels flat on the ground while keeping your knees at an angle of 90 degrees or higher and maintain the position of your arm so that your arm is below your heart.

■ Digital Noise Filter (Off / Low / Medium / High / Auto):

If the broadcast signal received by your TV is weak, you can activate the **Digital Noise Filter** feature to reduce any static and ghosting that may appear on the screen.

- When the signal is weak, try other options until the best picture is displayed.

■ HDMI Black Level (Low / Normal):

Lets you select the black level on the screen to adjust the screen depth.

- Available only in HDMI mode.

■ Film Mode (Off / Auto):

Sets the TV to automatically sense and process film signals from all sources and adjusts the picture for optimum quality.

- Available in TV, AV, COMPONENT (480i / 1080i) and HDMI (1080i).

Picture Reset (Reset Picture Mode / Cancel)

Resets your current picture mode to its default settings.

Basic Features

Sound Menu

Changing the Preset Sound Mode

 MENU  → Sound → Mode → ENTER 

Mode

- **Standard:** Selects the normal sound mode.
- **Music:** Emphasizes music over voices.
- **Movie:** Provides the best sound for movies.
- **Clear Voice:** Emphasizes voices over other sounds.
- **Custom:** You can customize the sound settings to suit your personal preferences.

Adjusting sound settings

 MENU  → Sound → Equalizer → ENTER 

Equalizer

Adjusts the sound mode.

- **Balance L/R:** Adjusts the balance between the right and left speaker.
- **100Hz / 300Hz / 1kHz / 3kHz / 10kHz** (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
- **Reset:** Resets the equalizer to its default settings.

Sound Settings

 MENU  → Sound → ENTER 

SRS TruSurround HD (Off / On)

(standard sound mode only)

This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF (Head Related Transfer Function) technology.

Preferred Language

(digital channels only)

Digital-TV broadcasts are capable of simultaneous transmission of many audio tracks (for example, simultaneous translations of the program into foreign languages).

 You can only select a language among the ones being broadcasted.



Multi-Track Sound (MTS)

(analog channels only)

- **Mono:** Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.
- **Stereo:** Choose for channels that are broadcasting in stereo.
- **SAP:** Choose to listen to the Separate Audio Program, which is usually a foreign-language translation.

 Depending on the particular program being broadcast, you can listen to **Mono**, **Stereo** or **SAP**.



Auto Volume (Off / On)

To equalize the volume level on each channel, set to **On**.

Sound Reset (Reset All / Reset Sound Mode / Cancel)

Reset all sound settings to the factory defaults.

Basic Features

Setup Menu

Setting the Time

 MENU  → Setup → Time → ENTER 

Time

- **Clock:** Setting the clock is for using various timer features of the TV.

 The current time will appear every time you press the INFO button.

 If you disconnect the power cord, you have to set the clock again.

Clock Mode (Auto / Manual)

- **Auto:** Set the current time automatically using the time from a digital channel.
 -  The antenna must be connected in order to set the time automatically.
- **Manual:** Set the current time manually.
 -  Depending on the broadcast station and signal, the auto time set up may not be correct. In this case, set the time manually.

Clock Set: Set the **Month, Day, Year, Hour, Minute** and **am/pm** manually.

 Available only when **Clock Mode** is set to **Manual**.

 You can set the **Month, Day, Year, Hour** and **Minute** directly by pressing the number buttons on the remote control.

Time Zone: Select your time zone.

 This function is only available when the **Clock Mode** is set to **Auto**.

DST (Off / On / Auto): Switches the Daylight Saving Time function on or off.

 This function is only available when the **Clock Mode** is set to **Auto**.

Using the Sleep Timer

 MENU  → Setup → Time → Sleep Timer → ENTER 

- **Sleep Timer** : Automatically shuts off the TV after a preset period of time. (30, 60, 90, 120, 150 and 180 minutes).

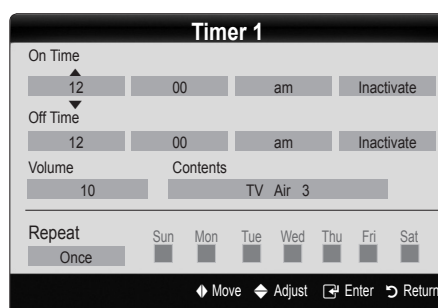
 To cancel the **Sleep Timer**, select **Off**.

Setting the On/Off Timer

 MENU  → Setup → Time → Timer 1 → ENTER 

You can set the TV to turn on automatically at a preset time.

- **Timer 1 / Timer 2 / Timer 3:** Three different on / off timer settings can be made. You must set the clock first.



On Time / Off Time: Set the hour, minute, and activate / inactivate. (To activate the timer with the setting you've chosen, set to **Activate**.)

Volume: Set the desired volume level.

Content: Select a content to be played when the TV is turned on automatically. (**USB** can be selected only when a USB device is connected to the TV.)

- **TV/USB:** Select **TV** or **USB**. (Make sure that an USB device is connected to your TV.)
- **Antenna:** You can view an antenna source.
- **Channel:** Select the desired channel.
- **Music:** Select the folder containing MP3 files on the USB device.
- **Photo:** Select the folder containing JPEG files on the USB device.

Basic Features

NOTE

- If there is no music file on the USB device or the folder containing a music file is not selected, the Timer function does not operate correctly.
- When there is only one photo file in the USB, the Slide Show will not play.
- If a folder name is too long, the folder cannot be selected.
- Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.

Repeat: Select **Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun** or **Manual** to set at your convenience. If you select **Manual**, you can set up the day you want to activate the timer.

 The  mark indicates the day is selected.

 **Auto Power Off** (available only when the TV is turned on by the Timer): The TV will be automatically turned off after 3 hours of being left idle to prevent overheating.

Locking Programs



MENU  → **Setup** → **V-Chip** → **ENTER** 

V-Chip

The PIN input screen appears. Enter your 4 digit PIN number. The V-Chip feature automatically locks out programs that are deemed inappropriate for children. The user must enter a PIN (personal identification number) before any of the V-Chip restrictions are set up or changed.

NOTE

- **V-Chip** is not available in **HDMI, Component**.
- The default PIN number of a new TV set is "0-0-0-0".
- **Allow All:** Press to unlock all TV ratings.
- **Block All:** Press to lock all TV ratings.

- **V-Chip Lock (Off / On):** You can block rated TV Programs.

TV Parental Guidelines: You can block TV programs depending on their rating. This function allows you to control what your children are watching.

- **TV-Y:** Young children / **TV-Y7:** Children 7 and over / **TV-G:** General audience / **TV-PG:** Parental guidance / **TV-14:** Viewers 14 and over / **TV-MA:** Mature audience
- **ALL:** Lock all TV ratings. / **FV:** Fantasy violence / **V:** Violence / **S:** Sexual situation / **L:** Adult Language / **D:** Sexually Suggestive Dialog



The **V-Chip** will automatically block certain categories dealing with more sensitive material. For example, if you block the **TV-Y** category, then **TV-Y7** will automatically be blocked. Similarly, if you block the **TV-G** category, then all the categories in the young adult group will be blocked (**TV-G, TV-PG, TV-14** and **TV-MA**). The sub-ratings (**D, L, S, V**) work similarly. So, if you block the **L** sub-rating in **TV-PG**, then the **L** sub-ratings in **TV-14** and **TV-MA** will automatically be blocked.

MPAA Rating: You can block movies depending on their MPAA rating. The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.

- **G:** General audience (no restrictions). / **PG:** Parental guidance suggested. / **PG-13:** Parents strongly cautioned. / **R:** Restricted. Children under 17 should be accompanied by an adult. / **NC-17:** No children under age 17. / **X:** Adults only. / **NR:** Not rated.



The **V-Chip** will automatically block any category that deals with more sensitive material. For example, if you block the **PG-13** category, then **R, NC-17** and **X** will automatically be blocked.

Canadian English: You can block TV programs depending on their Anglophone Canadian ratings.

- **C:** Programming intended for children under age 8. / **C8+:** Programming generally considered acceptable for children 8 years and over to watch on their own. / **G:** General programming, suitable for all audiences. / **PG:** Parental Guidance. / **14+:** Programming contains themes or content which may not be suitable for viewers under the age of 14. / **18+:** Adult programming.



The **V-Chip** will automatically block any category that deals with more sensitive material. For example, if you block the **G** category, then **PG, 14+** and **18+** will automatically be blocked.

Basic Features

Canadian French: You can block TV programs depending on their French Canadian rating.

- **G:** General / **8 ans+:** Programming generally considered acceptable for children 8 years and over to watch on their own. / **13 ans+:** Programming may not be suitable for children under the age of 13. / **16 ans+:** Programming is not suitable for children under the age of 16. / **18 ans+:** Programming restricted to adults.

 The **V-Chip** will automatically block any category that deals with more sensitive material. For example, if you block the **8 ans+** category, then **13 ans+**, **16 ans+** and **18 ans+** will automatically be blocked also.

Downloadable U.S. Rating: Parental restriction information can be used while watching DTV channels.

NOTE

- If information is not downloaded from the broadcasting station, the **Downloadable U.S. Rating** menu is deactivated.
- Parental restriction information is automatically downloaded while watching DTV channels. It may take several seconds.
- The **Downloadable U.S. Rating** menu is available for use after information is downloaded from the broadcasting station. However, depending on the information from the broadcasting station, it may not be available for use.
- Parental restriction levels differ depending on the broadcasting station. The default menu name and **Downloadable US Rating** change depending on the downloaded information.
- Even if you set the on-screen display to another language, the **Downloadable U.S. Rating** menu will appear in English only.
- The rating will automatically block certain categories that deal with more sensitive material.
- The rating titles (For example: Humor Level..etc) and TV ratings (For example: DH, MH, H..etc) may differ depending on the broadcasting station.

- **Change PIN:** The Change PIN screen will appear. Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Re-enter the same 4 digits in **Confirm New PIN**. When the Confirm screen disappears, select the **OK**. The TV has memorized your new PIN.

How to watch a restricted channel

If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following message will appear:

"This channel is blocked by V-Chip. Please enter the PIN to unblock."

 If you forget the PIN code, press the remote control buttons in the following sequence in Standby mode, which resets the PIN to "0-0-0-0": **POWER** (off) → **MUTE** → **8** → **2** → **4** → **POWER**(on).

Other Features

 **MENU**  → **Setup** → **ENTER** 

Language

Set the menu language.

1. Select **Language** and press the **ENTER**  button.
2. Choose desired language and press the **ENTER**  button.

 Choose between **English**, **Español** and **Français**.

Caption

(On-Screen Text Messages)

- **Caption (Off / On):** You can switch the caption function on or off. If captions are not available, they will not be displayed on the screen.

 The Caption feature doesn't work in Component, HDMI modes.



- **Caption Mode:** You can select the desired caption mode.

 The availability of captions depends on the program being broadcast.

Default / CC1~CC4 / Text1~Text4: (analog channels only) The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcasting signal, the Analog Caption function may or may not work with digital channels.)

Default / Service1~Service6 / CC1~CC4 / Text1~Text4: (digital channels only) The Digital Captions function works with digital channels.

 **Service1~6** may not be available in digital caption mode depending on the broadcast.

Basic Features

■ Digital Caption Options: (digital channels only)

Size: Options include Default, Small, Standard and Large. The default is Standard.

Font Style: Options include Default and Styles 0 to 7. The default is Style 0.

Foreground Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. You can change the color of the letter. The default is White.

Background Color: Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. You can change the background color of the caption. The default is Black.

Foreground Opacity: This adjusts the opacity of text. Options include Default, Transparent, Translucent, Solid and Flashing.

Background Opacity: This adjusts the opacity of the caption background. Options include Default, Transparent, Translucent, Solid and Flashing.

Return to Default: This option sets each Size, Font Style, Foreground Color, Background Color, Foreground Opacity and Background Opacity to its default.



NOTE

- **Digital Caption Options** are available only when **Default** and **Service1 ~ Service6** can be selected in Caption Mode.
- The availability of captions depends on the program being broadcasted.
- The **Default** setting follows the standards set by the broadcaster.
- The Foreground and Background cannot be set to have the same color.
- You cannot set both the **Foreground Opacity** and the **Background Opacity** to Transparent.

Game Mode (Off / On)

When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting the game mode.



NOTE

- Precautions and limitations for game mode.
 - To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.
 - If you display the TV menu in **Game Mode**, the screen shakes slightly.
- **Game Mode** is not available when the input source is set to **TV**.
- After connecting the game console, set **Game Mode** to **On**. Unfortunately, you may notice reduced picture quality.
- If **Game Mode** is **On**:
 - **Picture** mode is set to **Standard** and **Sound** mode is set to **Movie**.
 - **Equalizer** is not available.

Melody (Off / Low / Medium / High)

Set so that a melody plays when the TV is turned on or off.

Energy Saving (Off / Low / Medium / High / Auto)

This adjusts the brightness of the TV in order to reduce power consumption.

Basic Features

Support Menu

 MENU  → Support → ENTER 

Self Diagnosis

 Self Diagnostic might take few seconds, this is part of the normal operation of the TV.

- **Picture Test:** Use to check for picture problems.

Yes: If the test pattern does not appear or there is noise in the test pattern, select Yes. There may be a problem with the TV. Contact Samsung's Call Center for assistance (1-800-SAMSUNG).

No: If the test pattern is properly displayed, select No. There may be a problem with your external equipment. Please check your connections. If the problem persists, refer to the external device's user manual.

- **Sound Test:** Use the built-in melody sound to check for sound problems.

Yes: If you can hear sound only from one speaker or not at all during the sound test, select Yes. There may be a problem with the TV. Contact Samsung's Call Center for assistance (1-800-SAMSUNG).

No: If you can hear sound from the speakers, select No. There may be a problem with your external equipment. Please check your connections. If the problem persists, refer to the external device's user manual.

- **Signal Strength:** (Digital channels only) An HD channel's reception quality is either perfect or the channels are unavailable. Adjust your antenna to increase signal strength.

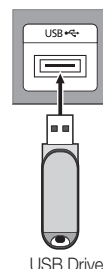
Software Upgrade

Samsung may offer upgrades for your TV's firmware in the future. Please visit Samsung.com or contact the Samsung call center at 1-800-SAMSUNG (726-7864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port.

 When software is upgraded, video and audio settings you have made will return to their default (factory) settings.

 We recommend you write down your settings so that you can easily reset them after the upgrade.

TV Rear Panel



HD Connection Guide

Refer to this information when connecting external devices to the TV.

Contact Samsung

View this information when your TV does not work properly or when you want to upgrade the software. You can find information regarding our call centers and how to download products and software.

Advanced Features

Media Play (USB)



Enjoy photos and/or music files saved on a USB Mass Storage Class (MSC) device.



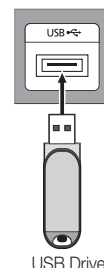
MENU → Application → Media Play (USB) → ENTER



Connecting a USB Device

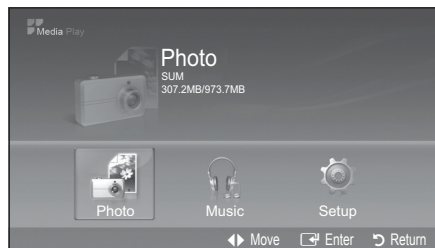
1. Turn on your TV.
2. Connect a USB device containing photo and/or music files to the **USB** jack on the rear of the TV.
3. When the **Application** selection screen is displayed, press the **▶** button to select **Media Play (USB)**, then press the **ENTER** button.

TV Rear Panel



Using the Media Play Menu

1. Press the **MENU** button. Press the **▲** or **▼** button to select **Application**, and then press the **ENTER** button.
2. Select **Media Play (USB)**, then press the **ENTER** button.
3. Press the **▲** or **▼** button to select the corresponding USB Memory Device, then press the **ENTER** button.
 - The Media Play menu differs depending on the USB Memory Device connected to TV.
 - Some devices may not be supported due to compatibility problems.
4. Press the **◀** or **▶** button to select an icon (**Photo**, **Music**, **Setup**), then press the **ENTER** button.



The USB function might not work properly with unlicensed multimedia files.

Read this information before using **Media Play (USB)** with a USB device:

- Only alphanumeric characters must be used as a folder name or file name (photo, music).
- The file system supports FAT16, FAT32 and NTFS.
- Certain types of USB Digital camera and audio devices may not be compatible with this TV.
- Media Play (USB) only supports the USB Mass Storage Class device (MSC). MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives and Flash Card Readers (Both USB and HUB are not supported.)

Advanced Features

- Before connecting your device to the TV, please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss.
- Please connect directly to the **USB** port of your TV. If you are using a separate cable connection, there may be a USB Compatibility problem.
- Only MP3 and JPEG file formats are supported.
- The Media Play (USB) mp3 format only supports music files with a high sampling frequency (32 kHz, 44.1 kHz, or 48 kHz).
- Available only supports the Sequential jpeg format. It does not support the Progressive jpeg format.
- Do not disconnect the USB device while it is loading.
- MSC supports MP3 and JPEG files, and the PTP device supports JPEG files only.
- MTP (Media Transfer Protocol) is not supported.
- The playing duration of an mp3 file may be displayed as "00:00:00" if its playing time information is not found at the start of the file.
- The higher the resolution of the image, the longer it takes to display on the screen.
- The Photo or Music List displays up to 300 folders or files.
- Loading may take some time depending on the size of the file.
- MP3 files with DRM that have been downloaded from a non-free site cannot be played.
- Digital Rights Management (DRM) is a technology that supports the creation, distribution and management of the content in an integrated and comprehensive way, including the protection of the rights and interests of the content providers, the prevention of the illegal copying of contents, as well as managing billings and settlements.
- The power-saving mode of some external hard disk drives may be released automatically when connected to the TV.
- If a USB extension cable is used, the USB device may not be recognized or the files on the device may not be read.
- If a USB device connected to the TV is not recognized, the list of files on the device is corrupted or a file in the list is not played, connect the USB device to the PC, format the device and check the connection.

Photo

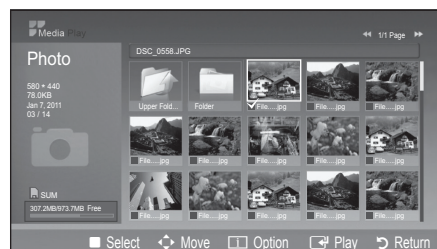
Viewing a Photo (or Slide Show)

1. Press the **INFO** button to display the option **View**, **Start Slide Show**, **Delete (Delete Selected File)**, **Delete All**, **Deselect All**.

2. Press the **▲** or **▼** button to select **Start Slide Show** then press the **ENTER**  button.

 During the slide show, files are displayed in order from the currently shown file.

 MP3 files can be automatically played during the slide show if the Default **Background Music** is set to **On**. To enable this function, MP3 files and other photo files must be located in the same folder on the USB Memory Device.



-  Press the **INFO** button during the slide show to set the following options **Slide Show Speed**, **Background Music**, **Background Music Setting**, **List**. Press the **▲** or **▼** button to select the option, then press the **ENTER**  button.
- After setting the option press the **ENTER**  button to make a change.

-  Press the **INFO** button during the photo view to set the following options **Start Slide Show**, **Zoom**, **Rotate**, **List**. Press the **▲** or **▼** button to select the option, then press the **ENTER**  button.
- After setting the option press the **ENTER**  button to make a change.

Advanced Features

Music

Using the MP3 List

	Folder icon
	Music list icon
	Move to the previous folder stage icon

 The selected file is displayed on the top with its playing time.

1. To select all files or a file, press the **INFO** button to display the **Music** menus.

Press the **ENTER**  button to select **Play** (or **Play selected files**), **Repeat Music**, **Delete** (or **Delete Selected File**), **Delete All** or **Deselect All**.

2. Press the **▲** or **▼** button to move to an icon, then press the **ENTER**  button.

Pressing the **ENTER**  button over a musical note icon immediately plays the music file.

Pressing the **ENTER**  button over a folder icon shows the music files included in the folder.

- **Play:** Select to play MP3 files.

 This menu only shows files with the MP3 extension. Files with other file extensions are not displayed, even if they are saved on the same USB device.

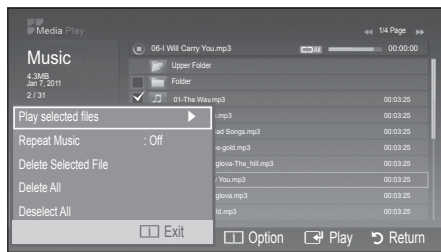
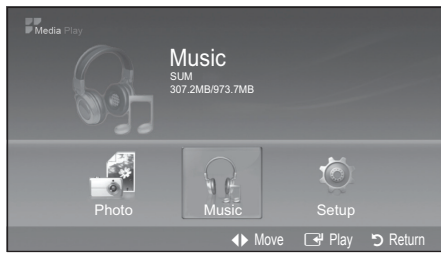
 To adjust the music volume, press the **—VOL+** button on the remote control. To mute the sound, press the **MUTE** button on the remote control.

- **Repeat Music (On / Off):** Select to repeatedly play MP3 files in the current folder.

Playing Music

- Only displays files with the MP3 file extension. Other file extensions are not displayed, even if they are saved on the same USB device.
- If the sound is strange when playing MP3 files, adjust the **Equalizer** and **SRS TruSurround HD** in the **Sound** menu. (An over-modulated MP3 file may cause a sound problem.)
- Music function information icons

	Repeat Music is On.
	Repeat Music is Off.

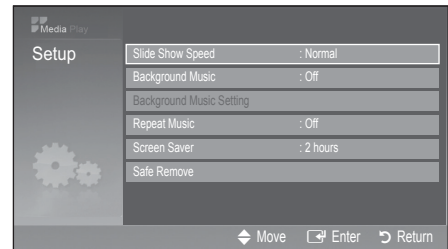


Advanced Features

Setup

Using the Setup Menu

- **Slide Show speed:** Select to control the slide show speed. You can select **Fast**, **Normal** or **Slow**.
- **Background Music:** Select to determine whether to play an MP3 file during a slide show. You can select music on or off.
- **Background Music Setting:** While a slide show is in progress, use the **Background Music Setting** to select a music file to listen to. Select an MP3 file as the background music.
- **Repeat Music:** Select to determine whether to repeat playing the music when all MP3 files in the current folder have been played.
- **Screen Saver:** Select to set the waiting time before the screen saver appears. The screensaver will appear when no button is pressed for **2 hours**, **4 hours**, **8 hours**, **10 hours** or **Off**.
- **Safe Remove:** You can remove the device safely from the TV.



Playing the selected photos / music files

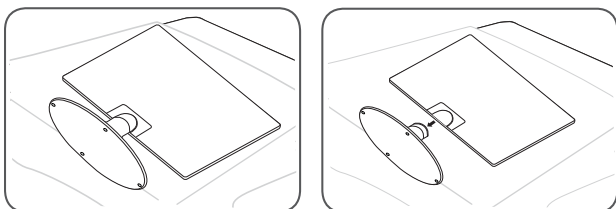
1. Press the yellow button.
2. Repeat the above operation to select desired photos / music files.
Selected photos or files are marked with the symbol ✓. To cancel a selection, press the yellow button again.
3. Press the ENTER button to play the selected photos or files.

Other Information

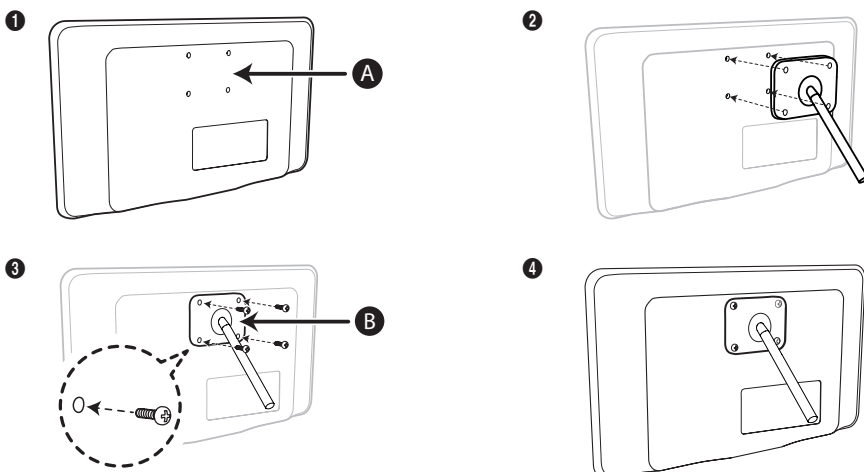
Attaching a Wall Mount/Desktop Stand

Preparing before installing Wall-Mount/Desktop Stand

1. Turn the product off and unplug the power cord from the wall outlet.
2. Place a soft cloth or cushion on a flat surface to protect the panel and place the product face down.
3. Hold the main body of the product with your hand. Pull the stand in the direction of the arrow as shown in the figure to separate it.



Attaching a Wall Mount/Desktop Stand



- A** Wall/Desktop Stand Mount
B Wall mount kit/desktop stand (not supplied)

4. Align wall mount/desktop stand to the Monitor/TV and firmly fix the wall mount/desktop stand by fastening the screw.
5. Align the groove of the part of the product that is to be connected to the stand with the groove in the stand (desk-top stand, wall mount stand or another stand) and firmly fix the stand by fastening the screw.

Other Information

NOTE

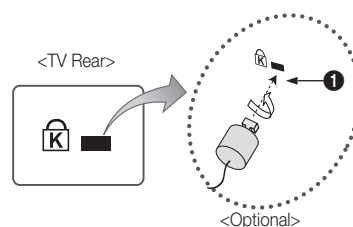
- If you use screws that are longer than the standard specifications, the inside of the product may be damaged.
- For wall mounts that are not compatible with the standard VESA specifications, the length of the screw may differ depending on the corresponding specifications.
- Avoid using screws that are incompatible with the standard VESA specifications and avoid assembling them using excessive force. This may result in damage to the product or injury due to the product falling. Samsung shall not be held liable for any damage or injury.
- Samsung shall not be held liable for any damage to the product or injury caused by using a wall mount/desktop stand that is not compatible with the specifications or due to an installation not performed by an authorized installation engineer.
- When installing the product using a wall mount, purchase a wall mount that provides at least 10 cm (3.93 inches) of space from the wall.
- Use the wall mount according to the international specifications.

Anti-theft Kensington Lock

A Kensington Lock is a device you can use to physically fix your TV in place when using it in a public place. You wrap the Kensington Lock's cable around a large, immobile object and then attach the lock to the Kensington slot on the back of the TV.

The appearance and locking method may differ from the illustration below depending on the manufacturer. Refer to the manual provided with the Kensington Lock for additional information on proper use. The Kensington Lock is not supplied by Samsung.

- Please find a "K" icon on the rear of the TV. A Kensington slot is beside the "K" icon.



To lock the product, follow these steps:

1. Wrap the Kensington lock cable around a large, stationary object such as desk or chair.
2. Slide the end of the cable with the lock attached through the looped end of the Kensington Lock cable.
3. Insert the locking device into the Kensington slot on the product ①.
4. Lock the lock.

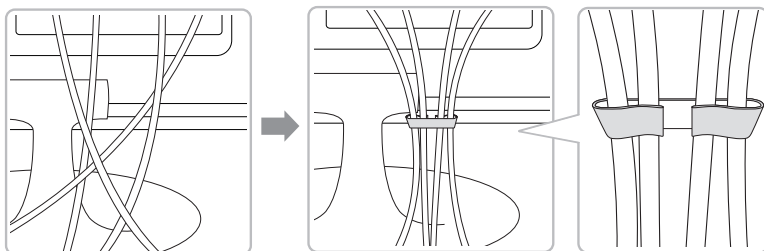
• These are general instructions. For exact instructions, see the User manual supplied with the locking device.

• The locking device has to be purchased separately.

• The location of the Kensington slot may be different depending on the TV model.

Assembling the Cables

Use the Cable Holder to hide the cables behind the stand.



- The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

Other Information

Troubleshooting

If the TV seems to have a problem, first review this list of possible problems and solution. If none of the troubleshooting tips apply, visit www.samsung.com/support or call Samsung customer Service at 1-800-SAMSUNG(1-800-726-7864).

Issues	Solutions and Explanations
PC Connection	
A Mode Not Supported message appears.	Set your PC's output resolution so it matches the resolutions supported by the TV (p. 17).
The video is OK but there is no audio.	If you are using an HDMI connection, check the audio output setting on your PC.
Poor picture	First of all, please perform the Picture Test and confirm that your TV is properly displaying the test image. (go to MENU - Support - Self Diagnosis - Picture Test) (p. 30) If the test image is properly displayed, the poor picture may be caused by the source or signal.
The TV image does not look as good as it did in the store.	- If you have an analog cable/satellite box, upgrade to an HD digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. - Cable/Satellite subscribers: Try HD stations from the channel line up. - Antenna connection: Try HD stations after performing Auto program. - Many HD channels are up scaled from SD(Standard Definition) contents. - Adjust the Cable/Sat box video output resolution to 1080i or 720p. - Make sure you are watching the TV at the minimum recommended distance based on the size and definition of the signal.
The picture is distorted: macro block error, small block, dots, pixelization.	- Compression of video contents may cause picture distortion, especially in fast moving pictures such as sports and action movies. - Low signal level can cause picture distortion. This is not a TV problem. - Mobile phones used close to the TV (cca up to 1m) may cause noise in picture on analog and digital TV.
Color is wrong or missing.	If you're using Component connection, make sure the component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen.
There is poor color or brightness.	- Adjust the Picture options in the TV menu. (go to Picture mode / Color / Brightness / Sharpness) (p. 22) - Adjust Energy Saving option in the TV menu. (go to MENU - Setup - Energy Saving) (p. 29) - Try resetting the picture to view the default picture settings. (go to MENU - Picture - Reset Picture) (p. 24)
There is a dotted line on the edge of the screen.	- If the picture size is set to Screen Fit, change it to 16:9 (p. 23). - Change cable/satellite box resolution.
The picture is black and white.	If you are using an AV composite input, connect the video cable (yellow) to the Green jack of component input 1 on the TV.
When changing channels, the picture freezes or is distorted or delayed.	- If connected to a cable box, please try to reset it. (reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes) - Set the output resolution of the cable box to 1080i or 720p.
Sound Problem	
There is no sound or the sound is too low at maximum volume.	First of all, please perform the Sound Test to confirm that your TV audio is properly operating. (go to MENU - Support - Self Diagnosis - Sound Test) (p. 30) If the audio is OK, the sound problem may be caused by the source or signal. Please check the volume of the device (Cable/Sat Box, DVD, Blu-ray etc) connected to your TV.
The speakers are making an inappropriate noise.	- Check cable connections. Make sure a video cable is not connected to an audio input. - For antenna or Cable connections, check the signal strength. Low signal level may cause sound distortion. - Perform the Sound Test as explained above.

Other Information

Issues	Solutions and Explanations
No Picture, No Video	
The TV won't turn on.	- Make sure the AC power cord is securely plugged in to the wall outlet and the TV. - Make sure the wall outlet is working. - Try pressing the POWER button on the TV to make sure the problem is not the remote. If the TV turns on, refer to "Remote control does not work" below.
The TV turns off automatically.	- Ensure the Sleep Timer is set to Off in the Setup menu (p. 26). - If your PC is connected to the TV, check your PC power settings. - Make sure the AC power cord is plugged in securely to the wall outlet and the TV. - When watching TV from an antenna or cable connection, the TV will turn off after 10 - 15 minutes if there is no signal.
There is no picture/video.	- Check cable connections (remove and reconnect all cables connected to the TV and external devices). - Set your external device's (Cable/Sat Box, DVD, Blu-ray etc) video outputs to match the connections to the TV input. For example, if an external device's output is HDMI, it should be connected to an HDMI input on the TV. - Make sure your connected devices are powered on. - Be sure to select the TV's correct source by pressing the SOURCE button on the remote control. - Reboot the connected device by reconnecting the device's power cable.
RF(Cable/Antenna) Connection	
The TV is not receiving all channels.	- Make sure the coaxial cable is connected securely. - Please try Auto Program to add available channels to the channel list. Go to MENU - Channel - Auto Program then select Auto and make sure the correct Cable TV signal type is set in the menu. There are 3 options (STD, HRC and IRC) (p. 20). - Verify the Antenna is positioned correctly.
The picture is distorted: macro block error, small block, dots, pixelization.	- Compression of video contents may cause picture distortion, especially with fast moving pictures such as sports and action movies. - A low signal can cause picture distortion. This is not a TV problem.
Others	
Purple/green rolling horizontal bars and buzzing noise from the TV speakers with Component cable connection.	Remove the left and right audio connections from the set-top-box. If the buzzing stops, this indicates that the set-top-box has a grounding issue. Replace the Component video cables with an HDMI connection.
A "Mode Not Supported" message appears.	Check the supported resolution of the TV, and adjust the external device's output resolution accordingly. Refer to the resolution settings on page 12 of this manual.
Caption on TV menu is greyed out.	Caption can not be selected in the TV menu when connected via HDMI or Component (p. 28). Caption must be activated on the external device (p. 29).
There is a plastic smell from the TV.	This smell is normal and will dissipate over time.
The TV Signal Strength is unavailable in the Self Diagnostic Test menu.	This function is only available with digital channels from an Antenna / RF/Coax connection (p. 30).
The TV is tilted to the side.	Remove the base stand from the TV and reassemble it.
The channel menu is greyed out (unavailable).	The Channel menu is only available when the TV source is selected.
Your settings are lost after 30 minutes or every time the TV is turned off.	If the TV is in the Store Demo mode, it will reset audio and picture settings every 30 minutes. Change the settings from Store Demo mode to Home Use mode in the Plug & Play procedure. Press the SOURCE button to select TV mode, and go to MENU → Setup → Plug & Play → ENTER (p. 15).
You have intermittent loss of audio or video.	- Check the cable connections and reconnect them. - Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If mounting the TV to a wall, we recommend using cables with 90 degree connectors.

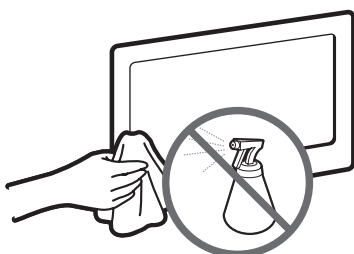
Other Information

Issues	Solutions and Explanations
You see small particles when you look closely at the edge of the frame of the TV.	This is part of the product's design and is not a defect.
POP (TV's internal banner ad) appears on the screen.	Select Home Use under Plug & Play mode. For details, refer to Plug & Play Feature (p. 15).

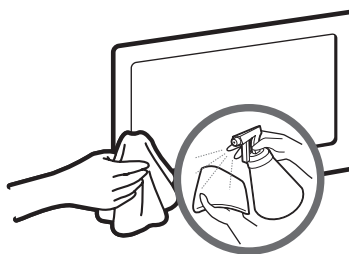
-  This panel uses a panel consisting of sub pixels which require sophisticated technology to produce. However, there may be a few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

Storage and Maintenance

-  If you attached some stickers on the TV screen, it remains some debris after removing the sticker. Please clean it to watch TV.
-  The exterior and screen of the product can get scratched during cleaning. Be sure to wipe the exterior and screen carefully using the cloth provided or a soft cloth to prevent scratches.



Do not spray water or a cleaning agent directly onto the product. Any liquid that goes into the product may cause a failure, fire, or electric shock.



Clean the product with a soft cloth dampened with amount of water.

License



TheaterSound HD, SRS and  symbol are trademarks of SRS Labs, Inc.
TheaterSound HD technology is incorporated under license from SRS Labs, Inc.



Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories

Open Source License Notice

In the case of using open source software, Open Source Licenses are available on the product menu.
Open source used in this product can be found on the following webpage. (<http://opensource.samsung.com>)
Open source License Notice is written only English.

Other Information

Specifications		
Environmental considerations	Operating	Temperature : 32°F ~ 122°F (0°C ~ 50°C) Humidity : 10 % ~ 80 %, non-condensing
	Storage	Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing
VESA Mounting Interface		100 mm x 100 mm
Tilt		-1° (±1°) ~ 20°(±1°)
Model Name		T27A300
Screen Size (Diagonal)		27 inches (68 cm)
Display Resolution		1920x1080@60Hz
Sound (Output)		5W x 2
Dimensions (W x H x D)	(Without Stand)	25.3 x 15.4 x 1.7 inches (642.1 x 392.3 x 44.2 mm)
	(With Stand)	25.3 x 18.6 x 8.6 inches (642.1 x 473.7 x 217.3 mm)
Weight	(Without Stand)	11.2 lbs (5.1 kg)
	(With Stand)	12.3 lbs (5.6 kg)

-  Design and specifications are subject to change without prior notice.
-  This device is a Class B digital apparatus.
-  For information about power supply, and more about power consumption, refer to the label attached to the product.
-  Some models may not be available for purchase depending on the region.

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website,
www.samsung.com/recyclingdirect, or call (877) 278 - 0799

Other Information

Index

A

Antenna	14
Auto Volume	25

B

Background Music	32, 34
Balance L/R	25
Batteries	13
Black Tone	23
Brightness	22

C

Cable Holder	36
Change PIN	28
Channel Menu	20
Clock	26
Color Tone	23
Component	16
Connecting to a PC	17

D

Dynamic	22
Dynamic Contrast	23

E

Edit Name	19
Editing Channels	21
Energy Saving	29
Equalizer	25

F

FAV.CH button	13, 20
Film Mode	24
Fine Tune	22
Flesh Tone	23
Frequency	18

H

HDMI	16
------	----

I

Installation Space	2
--------------------	---

L

Language	28
License	39

M

Media Play (USB)	31
Melody	29
Memorizing Channels	20
Mono	25
Music	33

N

Navigate	14
----------	----

O

ON/OFF button	13
---------------	----

P

Photo	32
Picture Size	23
Plug & Play	15
Power Indicator	12

R

Remote Control	13
Repeat Music	33, 34
Rotate	32

S

Select All	21
Self Diagnosis	30
Sharpness	22
Signal Strength	30
Sleep Timer	26
Slide Show	32
Software Upgrade	30
Source List	19
Specifications	40
Standby mode	12
Symbol	3

T

Timer	26
Tools	3
Troubleshooting	37

U

USB Drive	30, 31
-----------	--------

V

Volume	12, 14
--------	--------

W

Wall Mount	35
Warm	23
White Balance	23

**Contact SAMSUNG WORLDWIDE**

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Country	Customer Care Center ☎	Web Site	Address
CANADA	1-800-SAMSUNG (726-7864)	www.samsung.com	Samsung Electronics Canada Inc., Customer Service 55 Standish Court Mississauga, Ontario L5R 4B2 Canada
U.S.A	1-800-SAMSUNG (726-7864)	www.samsung.com	Samsung Electronics America, Inc. 85 Challenger Road Ridgefield Park, NJ 07660-2112
MEXICO	01-800-SAMSUNG (726-7864)	www.samsung.com	C.P 11570 AV. Presidente Masaryk No.111, Int. 701 Col. Chapultepec Morales, Delegacion Miguel Hidalgo Mexico D.F